DISARMAMENT

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New Agenda for Disarmament

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Joseph Cirincione

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Small Arms and Transparency

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Note

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New Agenda for Disarmament

Disarmament Processes for a World at Peace in Twenty Years

Klaus Törnudd

Disarmament is not an end in itself. Security—or more accurately peace and security—is usually regarded as the real objective of both disarmament and the possession of arms. The most desirable road to international peace and security, however, goes through disarmament. Disarmament programmes and strategies may include a wide range of partial or collateral measures, such as control, conversion, destruction, detection, dismantlement, inspection, limitation, non-proliferation, redeployment, reduction, removal, restriction, storage, verification. The more comprehensive concept to cover the whole range would probably be *arms regulation*. (The United Nations Charter mentions "regulation of armaments" in Articles 11 and 47.) Whatever terms are used, the overall objective of strengthening international peace and security must be kept in sight.

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A new document on disarmament

The 1978 Final Document of the first special session of the General Assembly devoted to disarmament refers to security and peace in its very first sentence.[1] At the same time, the whole document is permeated by an awareness of the arms race, which is not defined in the document but obviously regarded as well known and all pervasive. If a new document with the same purpose were to be written today, it should take into account:

(a) The substantive achievements in the area of disarmament policy since the year 1978.

(b) The need to integrate major disarmament strategies with other global programmes, such as An Agenda for Peace[2] and An Agenda for Development,[3] presented by the Secretary-General in 1992 and 1995, respectively.

(c) The end of the arms race, as we knew it during the cold war.

(d) The need to rethink the conceptual basis for arms regulation in the 21st century.

A new document would be the first comprehensive and multilateral statement on norms, principles and targets for disarmament policy in the post–cold war era. It could seek inspiration from the report of the former Secretary-General, *New dimensions of arms regulation and disarmament in the post–*

A new document would be the first comprehensive and multilateral statement on norms, principles and targets for disarmament policy in the post–cold war era.

cold war era, presented on the occasion of Disarmament Week in October 1992.[4] The report emphasized three basic concepts—integration, globalization and revitalization—as forming the foundation of an enhanced international effort in the field of disarmament and arms regulation. Globalization, particularly with regard to general norms and long-range strategies, should not be seen as conflicting with another approach, which also requires special attention in the new agenda for disarmament efforts, the regional, or even subregional approach. It has to be recognized that internal conflicts, often spilling over into neighbouring countries, are a major source of insecurity and tension. The management of those conflicts, incorporating confidence-building measures, "micro-disarmament" and weapons control, deserves all the attention that the United Nations or appropriate regional organizations are able to give. Globalization with regard to management of internal conflicts could also mean that the Security Council and the Secretary-General have at their disposal resources and standard procedures, ready for use in individual crisis situations.

This paper will not attempt to enumerate the substantive achievements in the area of disarmament or arms regulation since 1978. The progress in both ratification or accession to treaties already existing in that year as well as in the completion of new agreements and acceptance of new declared policies is well known and documented. Rather than an exhaustive attempt to sketch some objectives for continuing multilateral efforts, this paper is written with some awareness of recent discussions in the various organs involved, leaving aside the political-procedural issues of setting priorities, fixing deadlines, balancing agenda items or potential agenda items with each other or assigning agenda items to different deliberative or negotiating bodies.

It may be worth considering, however, what the time perspective of a possible new basic document should be. The Final Document of 1978 mentions in several places general

and complete disarmament under effective international control as the "ultimate objective of the efforts of States in the disarmament process", while the Programme of Action included in the Final Document enumerates a number of specific measures to be implemented "over the next few years". The contrast between these two time lines is striking. In fact, it is difficult to imagine in the foreseeable future a world in which general and complete disarmament has been accomplished.

On one hand, it can be argued that a long-term vision is needed in order to encourage short-term efforts. On the other hand, such a vision may change within a relatively short period. Rather than emphasizing general and complete disarmament as an ultimate goal, inevitably remote, a new document might therefore use a time perspective of 10–20 years, setting *a world at peace* as the goal for this period.

. . . a new document might use a time perspective of some 10–20 years, setting *a world at peace* as the goal for this period.

A world at peace defined

A world at peace would be one where States do not threaten and are not perceived to be threatening each other, where internal political or other divisions do not degenerate into warfare inside any State, where a high level of transparency pertains to transfers and stockpiles of military resources for defence or deterrence, and where the possession of weapons is sufficiently controlled in every State so that they are not available to terrorists or for other illegitimate uses.

This would be a world fully in harmony with the ideas of international cooperative security.

Setting objectives with a time line of 10–20 years and defining the means to reach them could in any case produce a long list of items. All of them should be examined and tested with at least three criteria in mind: Do they maintain or improve stability? Do they maintain or enhance confidence? Do they promote the downsizing of arsenals of weapons, whether deployed or in stockpiles?

Nuclear disarmament

Special attention needs to be given to the issues connected with nuclear arms, not because of any imminent risk that nuclear arms might actually be used, but because even a single case of such usage, even of a "small" nuclear arm, would profoundly alter for the worse the whole quest for international peace and security.

Nuclear disarmament has two tracks—bilateral and multilateral. The General Assembly would not need to discuss in detail the ongoing bilateral efforts pursued by the Russian Federation and the United States, but the progress already made in several bilateral processes by the two leading nuclear Powers needs to be given a prominent place in any new basic document on global disarmament issues. Other States have a strong interest in encouraging further rapid progress in a number of relevant fields: completion of the START I programme, early entry into force and implementation of the START II agreements, further implementation of the Cooperative Threat Reduction programme, completion of the Anti-Ballistic Missile Treaty/Theatre Missile Defence (ABM/TMD) demarcation talks[5], moving towards a START III agreement, pursuance of the fissile material stockpile reduction and data exchange programmes and other practical efforts. The new cooperative approach reflected in the current

bilateral track deserves recognition and support from all other States.

As Russia and the United States move towards negotiations on a START III agreement, more attention should also be given to dismantling and eliminating nuclear warheads. The earlier START agreements only required the sides to reduce the number of deployed warheads and to reduce (through elimination) the number of strategic missile launchers and heavy bombers. In principle, reductions carried out under these agreements are therefore reversible. Violations would of course be expensive, time-consuming and vulnerable to detection. Actual dismantlement and destruction of warheads continue in both countries, but are not covered by any agreed upon and documented arrangement. More transparency in START III would be highly desirable and was indeed emphasized in the Helsinki Summit Joint Statement of March 1997. Even if the two countries have agreed to exchange some stockpile information between them, they should be held accountable also to the international community as a whole. Conceivably, a joint database could be established bilaterally and gradually brought into a United Nations framework.

. . . more attention should be given to dismantling and eliminating nuclear warheads.

The multilateral track needs to include efforts to promote the widest possible ratification of the Comprehensive Nuclear-Test-Ban Treaty of 1996. Even if entry into force may not be on the horizon, the mere fact of the Treaty's existence and almost global acceptance has already made it an important part of de facto international law. Experience has shown that even non-binding treaties can point the way. The era of nuclear test explosions is over. What remains is to strengthen the legal basis of this incontrovertible fact.

There seems to be a widespread understanding that the following task for global negotiation in the nuclear field would be to prepare a treaty to ban production of fissile material for weapons and other explosive devices. Once this has been agreed, further steps could logically go towards agreed reductions of stockpiles or increased transparency, conceivably even international monitoring.

Another important task which will remain relevant during the next ten to twenty years is the follow-up to the 1995 Review and Extension Conference of the *Treaty on the Non-Proliferation of Nuclear Weapons*. The preparations leading up to the next review conference in the year 2000 should help to ensure that the continuing process of NPT review and implementation will be fruitful. In 1995, the parties to the NPT adopted "Principles and Objectives for Nuclear Non-Proliferation and Disarmament". This wording recalls one of the constant issues of the NPT process, the one of "balancing" nuclear disarmament and measures serving more directly the purpose of universal adherence to non-proliferation commitments. A reasonable approach to the NPT implementation process could now focus on filling gaps in the coverage of IAEA safeguards and on reviewing the experience gathered from strengthened reporting requirements and the use of special inspections of undeclared nuclear facilities.

Another focus could be on the zonal approach. Current nuclear-weapon-free zones cover the entire populated and large parts of the unpopulated southern hemisphere, through the Antarctic Treaty (1959), the Tlatelolco Treaty (1967), the Rarotonga Treaty (1985), the Bangkok Treaty (1995) and the Pelindaba Treaty (1996), although not all of these treaties are yet fully or formally in force. Other zones have been proposed, in Asia, Europe and the Middle East, but their realization does not seem likely in the foreseeable future, except possibly in Central Asia. Steps could be taken to create formal links between the existing zones, all of which have their own rules and administrations. They could learn from

each other and possibly modify their arrangements accordingly. It might also be possible to unify the security assurances given in different contexts, or possibly to extend the zonal approach, for example, by undertakings of the nuclear-weapon States towards specific maritime areas.

The enormous power of nuclear weapons makes it imperative to integrate regulatory measures that focus on the weapons themselves with political strategies designed to reduce even further the probability that nuclear weapons could actually be used. A realistic policy intended to promote nuclear disarmament should also take into account the fact that a total and irreversible elimination of nuclear weapons is hardly to be expected within the time line of 10–20 years. The nuclear Powers regard their arsenals as necessary both as direct deterrents and to prevent power projection by others. There is a need to bring together the debate on problems related to nuclear disarmament and the debates on nuclear strategy and security. A realistic objective, representing a synthesis of these two strands of thought, could possibly be found in the idea of minimal deterrence. Steps towards its acceptance by the nuclear Powers would represent major progress towards nuclear disarmament.

A large number of complementary efforts in the nuclear field are also feasible in the short term, including of course measures to regulate the deployment of the nuclear weapons that still remain in the arsenals of the nuclear-weapon States. For example, negotiation and codification of the unilateral declarations made in 1991 by at least four of these States concerning their withdrawal of sub-strategic nuclear weapons from naval ships, though almost impossible to verify, would be desirable.

More generally, attention should be given to all tactical or short-range nuclear weapons, which until now have been regulated mainly by unilateral commitments and actions. Transparency in unilateral commitments concerning with-

drawal for storage or destruction could be followed by contractual arrangements.

Negotiating a new global document on disarmament will undoubtedly involve testing the limits of the willingness of the nuclear-weapon States to commit themselves to measures designed to lead to the total elimination of nuclear weapons. The report of the Canberra Commission, for example, provides material for this particular discussion.[6] The measures recommended therein need to be pursued in a realistic spirit of consensus.

Chemical and biological weapons

The ongoing processes for strict control and elimination of other weapons of mass destruction, chemical and biological weapons, also deserve attention in a programme for advancing disarmament during the next 10 to 20 years. The immediate priority here is with further ratification and implementation of the Chemical Weapons Convention (CWC), which entered into force in April 1997, as well as continued implementation of the Biological Weapons Convention (1972). The achievement of a verification protocol to the Biological Weapons Convention must be one of the near-term priorities for global efforts in the disarmament field.

Ballistic missiles

On the borderline between weapons of mass destruction and conventional weapons are the means of delivery, in particular long-distance missiles, which can be used either with conventional or non-conventional payloads. Two treaties concluded between the Soviet Union and the United States could be multilateralized—the INF Treaty of 1987 dealing with the elimination of certain types of ground-launched missiles, and the 1988 Agreement concerning advance notification of launches of intercontinental ballistic missiles and submarine-launched ballistic missiles. At least as far as

Europe is concerned, there should be no problem with British accession to such an arrangement, nor with French accession once the missiles deployed on the Albion plateau have been dismantled.

Serious progress in the regulation of missiles, however, requires a bolder and more comprehensive approach. The basic problem is the same that affects nuclear technology: international cooperation for the legitimate use of aerospace technology for peaceful purposes should be permitted and even encouraged. Such technology should also be controlled, however, as a trade-off to ensure that it does not serve the purpose of developing long-range ballistic missiles.

> **. . . a new global document on disarmament would involve testing the limits of the willingness of nuclear-weapon States to commit themselves to measures leading to to the total elimination of nuclear weapons.**

A possible solution could be found in the negotiation of a global ballistic missile treaty, administered by a ballistic missile treaty organization. This idea has been the object of preliminary discussion among experts, with stimulating input from several sources, in particular from Canada. Some of the concepts already applied in the regulation of weapons of mass destruction could also be adapted to missile regulation: confidence-building measures (advance notification and registration of launches, data exchanges, invitational or challenge inspections), zonal or regional rules, and international verification procedures modelled on those applied, for instance, in the International Atomic Energy Agency (IAEA) and CWC. Partial measures with the purpose of confidence-building as well as agreement among like-minded regional partners could be the first steps towards global regulation.

A separate problem has to do with the regulation of long-range cruise missiles, which also could be used to deliver weapons of mass destruction. Preventing their proliferation is another highly complicated challenge where dual-use technology has to do with the construction of aircraft, in particular unmanned aerial vehicles.

Ballistic missile regulation and possibly cruise missile regulation could be put on the agenda of the Conference on Disarmament in Geneva, thus ensuring that this task is undertaken with an appropriate global approach.

Supplier regimes

The regulation of missiles is at present also attempted through the Missile Technology Control Regime (MTCR), a loose arrangement that brings together a number of States capable of supplying missiles or missile technology in an effort to prevent the proliferation of missiles and thus reduce the risks of causing instability. This brings up the question of supplier regimes, which must be faced squarely in any new comprehensive document on global disarmament policy. It is the sovereign right of every State to regulate its own weapons exports and other transfers in accordance with its own criteria. If several States follow similar criteria in this respect and agree to consult with each other, this means that a supplier regime is created as a matter of course. This should be regarded as a healthy and useful, perfectly legitimate development. Maximum transparency in the operation of such regimes and openness in willing to accept new members will help to dissipate doubts about their purpose. In the longer run, supplier regimes should be regarded as temporary arrangements, pending universal adherence to relevant treaties and the achievement of full confidence in their implementation.

Conceivably, suppliers' regimes could be complemented by efforts to constrain the demand for destabilizing weapons systems and sensitive technology, particularly

missile technology. Countries that have already achieved a certain level of self-sufficiency with regard to such technology may obviously be out of reach of the suppliers' constraints. Self-restraint would be the best solution, but political incentives might make it possible to apply demand-side measures in an organized manner through international cooperation. This seems to be an emerging issue in the field of arms regulation, which could be relevant especially in regional contexts.

Conventional weapons/arms transfers

Beyond the problems pertaining specifically to weapons of mass destruction and their delivery vehicles, a number of new questions of disarmament or arms regulation have become the focus of international attention in recent years. The system of norms regarding conventional weapons is still underdeveloped, and while some experience of actual disarmament measures has been gained, this has not come about as a result of global commitments. An important existing multilateral instrument is the United Nations Register of Conventional Arms, which has a great potential for growth in scope and accuracy. The direct responsibility of the United Nations ensures that this register is endowed with authority and legitimacy. It has a great future in the continuing efforts to achieve transparency and chart arms transfers with increasing effectiveness. A logical further step would be to add a normative element to the descriptive and analytical purposes presently served: a United Nations code of conduct

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on international arms transfers. Nationally, many States have adopted criteria and principles regarding arms exports and other sensitive transfers, including transfers of dual-use products and technology, and there are also regionally established principles, notably those applied by the European Union (EU) and the principles adopted under the Organization for Security and Cooperation in Europe (OSCE) auspices in 1993. Both regional and national rules can be regarded as the beginning of a regulatory global regime on international arms transfers. Steps towards the creation of such a regime have also been taken in a number of resolutions of the General Assembly and in the consensus report submitted in 1996 by the corresponding working group to the United Nations Disarmament Commission (UNDC). The trend should be towards increasing transparency, broadening the number of participating States and extending the coverage to new categories of weapons.

The Final Document of 1978 referred to the need for negotiations on "the balanced reduction of armed forces and of conventional armaments" to be conducted "with particular emphasis on armed forces and conventional weapons of nuclear-weapon States and other militarily significant countries". In the 1990s, a different emphasis is called for, one which highlights the need to cope with accumulations of weapons in many parts of the world that have dangerous and destabilizing effects, even if the quantities of arms are comparatively small.

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Humanitarian aspects of arms regulation

One important point of departure in this respect is the fact that disarmament and many specific forms of arms regulation in the conventional field have been based on humanitarian considerations, without aiming in the first place at improving the security of the States concerned. On some level, humanitarian motives and concerns about security are not always easily distinguished from each other.

International law has for a long time recognized the need to make warfare more humane and establish rules of conduct in war, including certain rules on the use of certain weapons. In our time this has taken the form of focusing on certain aspects of humanitarian law in armed conflicts and on "prohibitions or restrictions of the use of certain conventional weapons which may be deemed to be excessively injurious or to have indiscriminate effects". The first United Nations conference on the latter subject, held in 1979, led to the adoption of the instrument known as the Inhumane Weapons Convention, or Convention on Certain Conventional Weapons, which was the beginning of efforts to establish global norms for the regulation of conventional weapons.

Keeping up with the evolution of weapons technology is an important requirement, which to some extent has been reflected in the agenda of the 1995–1996 Review Conference that dealt with anti-personnel landmines and blinding laser weapons. While the results of that conference as far as landmines are concerned fell short of the expectations of most observers, the issue of strengthening international humanitarian law remains an important element of global disarmament programming. Fully respecting the overall goal of total prohibition regarding anti-personnel landmines (APLMs),[7] the existing or emerging rules concerning export moratoriums, detectability and self-destruct mechanisms are to be welcomed as building blocks in the ongoing normative efforts. Moreover, it is high time to set up an international,

coordinated programme, backed up with material resources and political determination, to undertake a comprehensive task of demining in all countries where mines continue to endanger human lives.

Practical disarmament

Arms regulation in the conventional field requires a combined emphasis on both normative action and practical steps to collect, remove and destroy certain types of weapons. The disarming of warring factions, collection of illicit small arms, suppression of terrorist violence, assistance to member States in the training of police forces, border surveillance and other programmes to counteract arms smuggling—all of this should as far as possible be integrated in the mandates for peace operations authorized by the United Nations. In this way, disarmament in the literal sense of the word can become a part of the operational activities of the United Nations.

. . . the Security Council can be expected to carry its share of the responsibility for operational disarmament.

The leading example of operational disarmament under United Nations auspices is of course the work of the United Nations Special Commission (UNSCOM) in Iraq. Recent reports indicate that full accounting of some Iraqi programmes is still lacking. The work of UNSCOM cannot therefore be regarded as an unmitigated success. The effort has been very useful, but the specific circumstances under which that particular operation has been carried out will of course rarely be duplicated. In any case, the experiences gathered both in a number of peace operations and in UNSCOM demonstrate that the Security Council can be expected to carry its share of the responsibility for operational disarmament.

Weapons embargoes decided by the Security Council are another form of geographically-limited arms regulation.

In Europe, the regulation of certain types of heavy conventional arms and armed forces achieved through the Conventional Forces in Europe Treaty (CFE), the review and implementation process initiated by the CFE Treaty and the operation of confidence-building measures agreed under OSCE auspices is a convincing example of a successful regional approach to disarmament. They deserve attention in any attempt to draw up a new programme for global purposes.

Conclusion

There are strong forces pushing ahead international efforts for disarmament and arms regulation. More and more, the emphasis will be on implementation rather than negotiating new norms and objectives. Disarmament may well be a growth industry in the sense that more and more elaborate administrative structures will be needed to monitor, register and verify the armaments of the world. The creation of a huge "Universal Disarmament Agency" is probably not in the cards, but a decentralized multi-dimensional management operation is taking shape. Integration with United Nations peace-keeping, peacemaking and peace enforcement activities is part of the picture. This ongoing development may not be likely to raise violent political passions, it may not captivate those who seek dramatic visions for the future, but it will be understood and appreciated by all those who keep working with patience and determination to regulate the lethal instruments of the world. It should be possible to reflect this

More and more, the emphasis will be on implementation rather than negotiating new norms and objectives.

understanding and appreciation in a global document adopted by consensus.

Notes

1. *Official Records of the General Assembly, Tenth Special Session, Supplement No. 4*, (A/S–10/4), section III.
2. Boutros Boutros-Ghali, *An Agenda for Peace* (A/47/277-S/24111). Subsequently issued as a United Nations publication (DPI/1247).
3. A/48/935 of 6 May 1994. Also published as a United Nations sales publication (DPI/1622/DEV–February 1995, Sales No. E.95.I.16).
4. Boutros Boutros-Ghali, *New Dimensions of Arms Regulation and Disarmament in the Post–Cold War Era* (United Nations publication, Sales No. E.93.IX.8).
5. A 1997 demarcation agreement between the United States and the Russian Federation distinguishes between strategic, or long-range anti-ballistic missile systems (ABMs), which are prohibited, and non-strategic or shorter-range ABMs, which are not.
6. Canberra Commission on the Elimination of Nuclear Weapons. The Executive Summary was issued as a document of the Conference on Disarmament (CD/1429).
7. The Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction was negotiated by more then 100 countries from 1–18 September 1997 in Oslo, Norway, and was opened for signature on 3 December 1997 in Ottawa, Canada.

New Initiatives Towards a World with Fewer Nuclear Weapons

Joseph Cirincione

Abstract

There is a growing international expert consensus for moving rapidly and seriously towards the elimination of nuclear weapons. One immediate step towards that goal, recommended in a number of expert reports, would be for the United States and Russia to end the cold war practice of maintaining thousands of nuclear missiles on "hair-trigger" alert, ready to launch on fifteen minutes notice.

The United States public strongly supports eliminating or greatly reducing the levels of nuclear weapons. There is also growing support among military leaders, both retired and active duty, for reducing the nuclear weapon stockpiles and budgets. The policies of the governments of the nuclear-weapon States do not yet fully reflect this public and military consensus. It is our task to help bring these government policies in line with the desires of their citizens.

There is a growing consensus among nuclear policy experts in the United States that dramatic changes are needed

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This article was based on a presentation made at the United Nations Conference on Disarmament Issues at Sapporo, Japan, 22–25 July 1997.

in United States nuclear policy and that much deeper cuts are possible in the nuclear arsenals of the United States and Russia. This year, over a dozen independent research institutes and study groups in the United States will release reports on reducing the threat posed by nuclear weapons and the feasibility of eliminating these weapons entirely. The directors of many of these projects formed the Committee on Nuclear Policy to emphasize and expand the emerging consensus on these vital issues.

The Committee includes project directors from the Atlantic Council, the Brookings Institution, the Center for Strategic and International Studies, the Council on Foreign Relations, the Henry L. Stimson Center, Princeton University, the Natural Resources Defense Council, and other institutes.

Members of the Committee join as individuals and their affiliation does not imply formal membership or assent on the part of their institution.

These experts are part of a larger current that has come to believe that the present nuclear policies are irrational and dangerous and that moving more rapidly towards elimination of nuclear weapons is directly in the national security interest of the United States and other nations.

The roots of consensus

The foundation of the new initiatives for the elimination of nuclear weapons has been built over the past few years. In particular, such initiatives have been forged in the continuing international debate over implementation of the Nuclear Non-Proliferation Treaty and further encouraged by global support for the Comprehensive Nuclear-Test-Ban Treaty. The collapse of the Soviet Union has now made fundamental change in nuclear policy possible, and has also increased concern that lack of control in Russia brings us dangerously close to nuclear accidents or nuclear terrorism.

Two recent reports have played a seminal role in developing the new consensus. The first is the report from the Henry L. Stimson Center released in December 1995: "Report of the Steering Committee of the Project on Eliminating Weapons of Mass Destruction".[1] The second is the Report of the Canberra Commission, released in August 1996.[2] Both reports gave new authority to calls for the elimination of nuclear weapons.

Report of the Stimson Center

The Stimson Center's Steering Committee report, chaired by the former Supreme Allied Commander in Europe, General Andrew Goodpaster, included among its members Paul Nitze, a major strategic advisor to both Democratic and Republican presidents, General Charles Horner, the commander of air combat operations during the Gulf War, former Secretary of Defense Robert McNamara, former Assistant Secretary of State Rozanne Ridgway, General W. Y. Smith and General William F. Burns. They concluded:

> "The cold war's end and the dangers of nuclear proliferation demand a fundamental reappraisal of the role of nuclear weapons in United States policy and in global politics. In the changing strategic environment, nuclear weapons are of declining value in securing United States interests, but pose growing risks to the security of the United States and other nations. The only military role of nuclear weapons—the deterrence of other nuclear threats—could be met with far fewer nuclear weapons. United States national security would be best served by a policy of phased reductions in all States' nuclear forces and gradual movement toward the objective of eliminating all weapons of mass destruction from all countries."[3]

Canberra Commission

The Canberra Commission report brought onto the international stage the consensus developing among the policy experts that government policies must move quickly and irreversibly towards the elimination of nuclear weapons. The prestigious panel concluded:

> "The Canberra Commission is persuaded that immediate and determined efforts need to be made to rid the world of nuclear weapons and the threat they pose to it....Nuclear weapons are held by a handful of States which insist that these weapons provide unique security benefits, and yet reserve uniquely to themselves the right to own them. This situation is highly discriminatory and thus unstable; it cannot be sustained. The possession of nuclear weapons by any State is a constant stimulus to other States to acquire them....The end of the cold war has created a new climate for international action to eliminate nuclear weapons, a new opportunity. It must be exploited quickly or it will be lost."[4]

Butler-Goodpaster statement

The most dramatic initiative, however, has been the joint statement issued on 4 December 1996[5] by General George Lee Butler, former Commander-in-Chief of the Strategic Air Command and a member of the Canberra Commission, and General Andrew Goodpaster, the chairman of the Stimson Center's Steering Committee report. They concluded simply:

> "As senior military officers, we have given close attention over many years to the role of nuclear weapons as well as the risks they involve. With the end of the cold war, these weapons are of sharply reduced utility, and there is much now to be gained by substantially reducing their numbers and lowering

their alert status, meanwhile exploring the feasibility of their ultimate complete elimination."

Statement of Generals and Admirals

The Butler-Goodpaster statement was followed the next day by the release of a joint statement in favour of the elimination of all nuclear weapons by 61 international generals and admirals.[6] These statements launched an unprecedented national debate on nuclear policy. For the first time, senior officials and experts are debating the fundamental basis for United States nuclear policy absent any external international crisis. That is, this debate has not been triggered by a Cuban missile crisis, a critical summit, or tensions over deployment of missiles in Europe. This public debate, which continues today, has been generated purely by the power of the idea of eliminating nuclear weapons and by the prestige of the former military leaders who now advocate it.

Support for elimination of nuclear weapons

There is also strong public support in the United States for eliminating nuclear weapons or greatly reducing their number. Meanwhile, the military's enthusiasm for these weapons has waned. Representatives of the Joint Chiefs of Staff testified to Congress that they fully support reducing deployed strategic warheads down to the limit of 2,500 proposed for the new START III treaty and that they would like to reduce below the 6,000 warhead limit of the START I Treaty even before the Russian Duma ratifies START II. This is, in part, motivated by concerns that the United States would have to spend an additional $ 1 billion annually to maintain its forces at the START I level. Overall, the United States currently spends approximately $33 billion per year to operate and deploy its nuclear forces. Some senior military leaders would like to divert these funds to other, more vital, military missions.

Overall, expert opinion on this issue has moved away from debates over verification regimes for maintaining stable but still large nuclear arsenals towards serious consideration of a world with radically fewer or no nuclear weapons. These debates, however, have yet to penetrate official government policy in the United States. Officials in the current Administration are comfortable with the course of their policies, confident that the reduction process will proceed smoothly from START II to START III, and see no need to change their policies or to question their assumptions. But the experts are hammering at these doors of complacency.

The joint statement of the Committee on Nuclear Policy issued in January 1997 summarizes the basic steps that many feel must be taken now. It states:

> "The United States and world security are threatened by the continued existence of nuclear weapons and by the efforts of States to rely on nuclear weapons to meet their security objectives.
>
> Therefore, our ultimate objective must be the elimination of all nuclear weapons by all nations through a verifiable and enforceable international agreement. Keeping in mind this goal and recognizing this will be a long and arduous process, the United States should now:
>
> 1. Restate forcefully its commitment to the ultimate goal of eliminating nuclear weapons by verifiable international agreements.
>
> 2. State clearly that the United States will no longer plan for the use of nuclear weapons to deter or respond to non-nuclear attacks and that it maintains nuclear weapons only for the purpose of deterring their use as long as they are held by other States.
>
> 3. Reduce the danger of nuclear war and the perception that we continue to rely on nuclear

weapons by exploring with other nuclear States a series of measures that will immediately remove land- and sea-based ballistic missiles from hair-trigger alert, and then progressively extend the time that would be required to return them to rapid response postures.

4. Negotiate and implement deeper reductions in nuclear weapons with Russia and make clear its willingness to do so immediately.

5. Begin discussions with all nuclear-weapon States on measures, such as a comprehensive accounting system for nuclear weapons and materials, that would facilitate agreements to reduce nuclear-weapon stockpiles and the enforceable verification of an agreement to eliminate all nuclear weapons in all nations.

We believe these steps merit the support of all those concerned with the dangers of nuclear weapons including those who may not at this time favor the elimination of all nuclear weapons."

These basic steps form the core of most of the initiatives now under way in the United States to change Administration policy. For example, former Senator Sam Nunn and Dr. Bruce Blair wrote in *The Washington Post* on 22 June 1997, criticizing the slow pace of the Administration's programme of nuclear reductions: "After discussing the nuclear situation at length with many Russian security officials", they say, "we believe the nuclear policies of both our countries need to change. Instead of threatening Armageddon to avoid war, we should pursue 'mutual assured safety' as our paramount goal".

Senator Nunn and Dr. Blair strongly urge that we de-alert our nuclear forces now.

"By de-alerting, we mean adopting measures that increase the amount of time needed to prepare nuclear

forces for launch. Although such measures could be reversed if circumstances change and national security requires it, de-alerting would create a judicious delay in the capacity for launch in order to assure more reliable control over nuclear weapons, to reduce daily nuclear tensions, and to strengthen mutual confidence in each other's nuclear intentions. De-alerting does not mean the elimination of nuclear weapons, but it would eliminate their hair trigger."

De-alerting the nuclear forces has become the major new initiative proposed by experts and non-governmental organizations in Washington and there is increasing press attention to the issue. For example, *Newsweek* has warned of the irrationality of keeping nuclear weapons poised to send thousands of warheads aloft on 15 minutes notice.

Instead of threatening Armageddon to avoid war, we should pursue "mutual assured safety" as our paramount goal.

> "The risk of a nuclear incident might have been sharply reduced had the United States taken bolder steps to stand down its own forces during the 1990s—and talked the Russians into similar moves.... The general then in charge of the nuclear forces, Lee Butler, knew the Single Integrated Operational Plan (SIOP) was a 'product of madness'. He had been to Russia and seen the state of decay of its armed forces. 'They couldn't even make the runway lights work'. Butler began marching through the SIOP 'like Sherman through Georgia', eliminating targets and taking the B-52s off alert. Butler even wanted to begin standing down intercontinental

ballistic missiles (ICBMs). Butler's ideas were deemed too radical. Fearful of Congressional Republicans and uneasy about taking on the military, President Clinton has done little to ease the nuclear confrontation.

Yet the risk hasn't gone away. Ironically, the crumbling state of Russia's arsenal heightens a new danger: the chance of nuclear war by accident. As the Soviet empire disintegrated, the Kremlin lost most of its early-warning radars, making those who control the weapons jumpy. Because its missiles are now fixed targets, the military has just 15 minutes in an attack to either use them or lose them. With its conventional forces vastly reduced, Russia now views its nuclear weapons as a first line of defense—not weapons of last resort. The Kremlin warns that it will 'launch on warning' rather than lose its whole arsenal to a first strike."[7]

De-alerting the nuclear forces has become the major new initiative proposed by experts and non-governmental organizations.

The respected expert journal *The Washington Quarterly* devoted its summer issue to the new intensified debate on nuclear arms control. Editor Michael Mazarr summarizes what he terms "the strong agreement within United States National Security circles that additional reductions in the numbers and alert levels of nuclear weapons would serve United States interests". He describes two trends:

"Some observers—such as the Stimson Center study group—came to this conclusion largely for reasons familiar to arms control advocates, namely, the dangers inherent in large nuclear stockpiles. But the

> others, such as Fred Ikle and Paul Nitze...placed more emphasis on a new, post–cold war case against a high level of nuclear armament—that it obstructed the emergence of a new United States–Russian relationship, or that it enshrined a world of nuclear deterrence that canceled out United States conventional military dominance."[8]

Every month, new articles, studies or reports appear building the case for a change in policy. The most recent, and perhaps the most prestigious new report has been released by the National Academy of Sciences (NAS). The Academy urges the United States Government to take immediate action to reduce the risks of nuclear war and to move towards the international prohibition of nuclear weapons. The recommendations are contained in a detailed study, "The Future of United States Nuclear Weapons Policy", by a distinguished panel of scientists, retired military officials and experts, and chaired by retired Army Major General William F. Burns.[9]

The panel warns that United States nuclear weapons policy must be adapted to the post–cold war requirements. Smaller forces, they say, would greatly reduce the threat of accidental or unauthorized launches. The panel says:

> "The basic structure of plans for using nuclear weapons appears largely unchanged from the situation during the cold war, with both sides apparently continuing to emphasize early and large counterforce strikes and both remaining capable, despite reductions in numbers and alert levels, of rapidly bringing their nuclear forces to full readiness for use.
>
> "As a result, the dangers of initiation of nuclear war by error (e.g., based on false warning of attack) or by accident (e.g., by a technical failure) remain unacceptably high."

In sharp contrast to current government policy, General Burns said at a Washington briefing where the report was released, that, "we strongly recommend immediately beginning serious discussions to outline the details of the proposed START III agreement, rather than waiting for START II to be implemented". The study concludes that the United States and Russia must continue the reductions of their nuclear forces, which the START negotiations have begun. Moreover, the other declared and undeclared nuclear-weapon States must be brought into the process in order to facilitate United States and Russian reductions to a level below 1,000 warheads each. The level of 1,000 would include all warheads—strategic and non-strategic, active and reserve—as compared to current plans to maintain a "hedge" force of thousands of warheads that could be rapidly redeployed.

"... the dangers of initiation of nuclear war by error or by accident remain unacceptably high."

The study concludes that nuclear weapons should be restricted to their "core function" of only deterring or responding to a nuclear attack against the United States and its allies. "Our fundamental recommendation", said General Burns, "is that the United States should restrict the role of nuclear weapons to deterring or responding to a nuclear attack....the United States should not threaten to respond with nuclear weapons to attacks by conventional, chemical, or biological weapons." Once nuclear weapons have been restricted to this military utility, it will be possible to enact certain steps that would help reduce the dangers that nuclear weapons continue to pose.

The NAS study is the most authoritative American study yet in the growing expert consensus that new, dramatic steps are needed to revise United States nuclear poli

study urges the government to begin now to institute the following recommendations to reduce the dangers inherent in current policies and postures:

—Talks to outline the details for the proposed START III agreement should begin immediately, before START II is implemented. "With the cold war over, planning to retaliate massively against a nuclear attack is not the appropriate basis for making responsible decisions regarding the actual use of nuclear weapons."

The NAS study is the most authoritative American study yet in the growing expert consensus that new, dramatic steps are needed to revise United States nuclear policy.

—The United States should begin technical discussions with the Russians to provide higher levels of operational safety for nuclear weapons. Further studies are needed to examine methods that could reduce the dangers of the hair-trigger alert postures which both United States and Russian nuclear forces are presently in. "Elimination of continuous-alert practices should be pursued as a principal goal in parallel with, but not linked to, START III."

—The United States should make "no-first–use" of nuclear weapons its explicit doctrine, rather than maintaining its position of "first-use-if-necessary". Russia should also be encouraged to return to a policy of no-first-use.

—United States ballistic missile defence research and development should remain focused on effectively defending against the threat from shorter-range missiles, follow-

ing the guidelines outlined by the Anti-Ballistic Missile Treaty. "The focus...should be to field a mobile system capable of defending relatively small areas against projected theatre ballistic missile threats, which the committee believes will remain limited to a range of roughly 1,000 kilometers for some time."

—"The end of the cold war", the report concludes, "has created conditions that open the possibility for serious consideration of proposals to prohibit the possession of nuclear weapons. The committee has concluded that the potential benefits of a global prohibition of nuclear weapons are so attractive relative to the attendant risks that increased attention is now warranted to studying and fostering the conditions that would have to be met to make prohibition desirable and feasible."

Implementing these recommendations will not be easy; reports alone are never enough. It will require a great deal of determined effort, a focused campaign, and close coordination among experts and non-government advocates. The trends, however, seem clear. It is likely that over the next year the failure of the current policies to continue the progress towards reducing nuclear dangers will become more obvious. It is likely that the power and inherent logic of the new initiatives will attract wider and wider support, and eventually prevail.

Notes

1 An Evolving U.S. Nuclear Posture, Second Report of the Steering Committee of the Project on Eliminating Weapons of Mass Destruction (Henry L. Stimson Center, December 1995).

2 See Executive Summary circulated as a document of the Conference on Disarmament (CD/1429).

3 An Evolving U.S. Nuclear Posture.

4 CD/1429.

5. See also White House Statement by the Press Secretary (http://www.stimson.org/generals/whstatem.htm.)

6. Statement on Nuclear Weapons by International Generals and Admirals (http://www.stimson.org/generals/internet.htm.)

7. *Newsweek*, 23 June 1997.

8. *The Washington Quarterly*, Summer 1997.

9. National Academy of Sciences, *The Future of U.S. Nuclear Weapons Policy* (Washington, D.C., National Academy Press, 1997).

Consolidating the Arms Control Regimes for Biological and Chemical Weapons

Malcolm Dando

When the long East-West cold war of the second half of the 20th century came to an end, there was a period of doubt over the future of arms control and disarmament. This doubt was not caused by the relaxation of tensions but by the consequences of the domination of one particular form of arms control (bipolar, nuclear) during the cold war. It could reasonably be asked whether this might be relevant in the new conditions.

With the growing understanding that arms control and disarmament are political tools used in many different forms as part of the security policy of States,[1] we are once again able to concentrate on the crucial question of deciding what forms of arms control will best help us deal with our present problems. These problems were addressed by James Steinberg, Deputy Assistant to the United States President for National Security Affairs in the opening address to an international conference hosted by the Carnegie Endowment

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This article was based on a presentation made at the United Nations Conference, "New Agenda for Disarmament and International Security," 22–25 July 1997, Sapporo, Japan.

for International Peace in Washington, D.C. in June 1997. He noted the *demand* side of the proliferation problem:[2]

> "In particular, persistent regional conflicts and the ambitions of rogue States create an all-too-thriving market for destabilizing WMD [weapons of mass destruction] systems and technologies, especially in the Gulf, South Asia, and the Korean peninsula . . ."

Then he continued, very significantly from our point of view today:

> "The horses of low-tech proliferation—chemical and biological weapons and short-range ballistic missiles—are virtually out of the barn. And the relative accessibility of chemical and biological weapons increases the danger they could be used in a terrorist attack."

Steinberg went on to suggest that we have three lines of defence against such proliferation: international treaties, cooperation among suppliers to control exports, and dealing with the underlying causes of the conflicts.

In Steinberg's opinion, international treaties are the first line of defence and establish the normative and legal structures that allow us to deal with the whole problem of proliferation of weapons of mass destruction. In common with other current assessments, such as that of the International Institute of Strategic Studies in London,[3] Steinberg argued that while good progress has been made in building the nuclear non-proliferation regime, controlling the spread of offensive chemical and, particularly, biological weapons programmes is proving to be much more difficult for the international community. In regard to the control of chemical weapons he suggested:

> ". . . Now that the CWC [Chemical Weapons-Convention] has entered into force, we must ensure that the Organisation for the Prohibition of Chemical

> Weapons has the resources and the political support for implementation. CWC members will need to work together to expand adherence to the CWC. In particular, we hope that the Russian Duma will ratify the CWC as soon as possible." [Editor's Note: The Russian Federation ratified the Convention on 5 November 1997.]

With regard to biological weapons he was more pessimistic:

> "In some respects, the BWC [Biological Weapons Convention] regime poses an even greater challenge. Although the Treaty has been in force since 1972 and membership is nearly universal, the regime lacks any compliance or enforcement mechanisms. At the United Nations [in 1996], President Clinton called on the international community to complete, by 1998, a legally binding protocol to the BWC that would establish tough compliance procedures, including appropriate on-site inspections . . ."

Clearly, there is much urgent work to be done to strengthen these two regimes because, as the nuclear non-proliferation regime is developed, chemical and biological weapons could appear more attractive to a potential proliferator. Furthermore, as the control of chemical weapons is also tightened, biological weapons could become that much more of an attractive option.

In this paper I will, first of all, briefly outline why chemical and biological weapons might be considered of military use and then assess current issues related to the strengthening of their control regimes. As biological weapons and biological arms control often receive less attention, I will give them more weight in my discussion. In conclusion, I will look forward to the prospects for an integrated arms control regime properly covering both types of weapons systems.

Chemical and biological weapons

Chemical and biological weapons are often treated together as weapons of mass destruction that might be used in place of nuclear weapons because they are cheaper and easier to produce—the so-called poor man's bomb. There are, however, very important differences between them that need to be understood.

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Chemical weapons

With the rise of modern chemistry,[4] the danger of the effective misuse of the new science became clear and was first addressed at the Hague Conference of 1899. Unfortunately, this recognition did not prevent the large-scale use of chemical weapons during the First World War or the subsequent use of such weapons in other wars, for example, by Iraq against Iran and against its own people during the 1980s.

A recent United States threat assessment included the following categories of chemical agent:[5] nerve (e.g., sarin); vesicant (e.g., sulphur mustard); blood (e.g., hydrogen cyanide); choking (e.g., phosgene); incapacitant (e.g., LSD); riot control agent (e.g., tear gas). The lethal phosgene choking agent and the mustard gas vesicants were heavily used in the First World War. Nerve agents, which are effective in much smaller amounts, were discovered in Germany in the 1930s and became major components of United States and Soviet chemical weapons arsenals during the cold war period.

Though chemical weapons are generally treated as weapons of mass destruction (WMD), it must be emphasized

that they are not truly equivalent to nuclear weapons for strategic purposes. Technical analyses show quite clearly that, because of the large amounts of a given chemical that have to be dispersed for effectiveness, they are best regarded as tactical weapons systems for the battlefield.[6] In battle situations they are, of course, of most use against poorly protected troops.

Biological weapons

There is some overlap between the toxic chemicals produced by man for use in warfare and the non-living toxins—such as botulinal toxins—produced by living micro-organisms. A small number of such toxins are covered specifically by the CWC and all are covered by the BWC. Most biological weapons, however, are living organisms that can harm animals, plants and humans.

Standard lists of potential biological weapons agents would therefore include the following:[7]

- living agents capable of self-reproduction (bacteria, fungi)
- living agents capable of reproduction only in a host cell (viruses)
- non-living agents incapable of reproduction, but secreted by living organisms (toxins)
- non-living agents incapable of reproduction that are obtained by chemical synthesis but whose structure is identical or very similar to that of agents in the category above.

The important point is that the living agents can reproduce *inside* the organism attacked. Therefore, very small amounts need to be produced and initially dispersed in order to have massive consequences. In their area of coverage, thus, biological weapons can truly be considered as weapons of mass destruction equivalent to nuclear weapons. A standard open-source literature account, for example, suggests that 100

kg of anthrax spread on the wind in the right conditions for large-scale inhalation by the population of Washington, D.C. could kill 1–3 million people within days.[8]

It is sometimes argued that while these figures may be correct, biological weapons are less serious a threat because, unlike chemical weapons, they have not been widely used in modern warfare. Though that is fortunately true, biological weapons have been tested in all circumstances short of war in the large-scale offensive biological weapons programmes of, among others, Japan, the United Kingdom, the United States, the former USSR and Iraq during this century. It must also be remembered that the modern revolution in biology, the systematization of our knowledge about the structure and function of our hereditary material exemplified in the Human Genome Project, will increasingly turn biology into a mechanistic science that could be used for harmful, as well as beneficial, ends.

. . . biological weapons can truly be considered as weapons of mass destruction equivalent to nuclear weapons.

One striking similarity between chemical and biological weapons is that they both result from dual-use technologies that can be used for both civil and military objectives. In order to deal with this problem, both the CWC and the BWC crucially incorporate a General Purpose Criterion.[9] Thus in the CWC the scope extends to all toxic chemicals and to all their precursors, except:

> ". . . where intended for purposes not prohibited under this Convention, as long as the types and quantities are consistent with such purposes . . ."

The analogous wording in the BWC incorporates within its scope all:

> "... microbial or other biological agents, or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes."

As Perry Robinson has pointed out, this General Purpose Criterion means that neither agreement can be outdated because of new technological developments. For example:

> "... New immobilizing or other psychotropic chemicals may be developed if they are meant for pharmaceutical, veterinary or other peaceful purposes but not if their disabling properties are intended to be used as a method of warfare ..."[10]

Given the previous history of the use of non-lethal chemical agents in warfare (for example, the use of CS tear gas by the United States in Viet Nam), this wide scope is crucial for providing transparency and confidence-building between States.[11]

The status of the control regimes

Both chemical and biological weapons could be used in devastating terrorist attacks, but it is ironic that the international community, which expended so much effort to put the modern and potentially very effective CWC into force in 1997 to control the strategically less important chemical weapons systems, has allowed the control regime for the strategically extremely significant and threatening biological weapons systems to languish without any effective verification provisions.

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The Chemical Weapons Convention

The negotiators of the CWC achieved agreement on a Convention with two clear goals:

> ". . . First, it mandates declaration and destruction of existing chemical weapon stockpiles and production facilities. . . . Second, the CWC seeks to verify that States parties do not initiate or resume CW production or storage . . ."[12]

The United Nations Secretary-General, speaking at the opening of the first session of the Conference of the States Parties in May 1997, said that the banning of this whole class of weapons in a modern and potentially extremely effective agreement was an historic event. In his view:

> "The Convention establishes an international norm against the development of chemical weapons for all time, and provides the legal and political basis for firm action against those who would violate its rules."[13]

The Secretary-General also urged all 185 members of the United Nations to join the Convention, seeing universal adoption as the key to effective implementation.

He further stressed the need for patience and determination to put the Convention into practice. He specifically noted the new responsibilities undertaken by some States:

> "A Convention as sweeping, as universal and as specific as this will undoubtedly need a process of adjustment. . . . Some signatories are new to multilateral regimes of this nature, others uneasy about the verification process and its power of inspection".

The difficulties that lie ahead were clearly evidenced by the failure to resolve a number of important issues at the first session of the Conference of the States Parties, despite the four

years of intense negotiations in the Preparatory Committee of the Organisation for the Prohibition of Chemical Weapons.[14] Moreover, the vast stocks of chemical weapons built up by both the United States and the former Soviet Union have yet—at great cost—to be destroyed.

The Biological Weapons Convention

If the problem with the CWC is that we have agreed an effective solution but have yet to implement it, the problem with the BWC is that we have yet to agree an effective solution.[15] The BWC was agreed in the early 1970s, in the middle of the cold war. The heart of the Convention is set out in Article I, which states that:

> "Each State Party to this Convention undertakes never in any circumstances to develop, produce, stockpile or otherwise acquire or retain:
>
> (1) Microbial or other biological agents, or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes . . ."

Unfortunately, at that time it was not possible to agree any means by which this undertaking could be effectively verified.

This deficiency began to cause increasing concern in the 1980s as the revolution in biotechnology got under way, and, at the Second Review Conference in 1986, a series of voluntary confidence-building measures (annual data exchanges) were agreed to. Those measures were developed and expanded at the Third Review Conference, in 1991. The results of that exercise, however, were disappointing, with low levels of returns and many inadequate returns.[16] At the Third Review Conference an ad hoc group of experts was mandated to examine possible means of verifying the Convention. This VEREX group reported to a Special Conference in 1994, and another ad hoc group was then

mandated by this Conference to draft proposals for strengthening the Convention as a legally binding instrument.

If the problem with the CWC is that we have agreed an effective solution but have yet to implement it, the problem with the BWC is that we have yet to agree an effective solution.

During the 1990s widespread concern over the proliferation and possible use of biological weapons has mounted, following the revelation of clear evidence of offensive programmes in both Iraq and the former Soviet Union. There is also evidence of *official* concern. For example, at the Fourth Review Conference in November 1996, the United Kingdom Foreign Office Minister of State noted that:

> "A general perception held that the biological weapons problem was solved; that it did not present a real risk or threat; and that it did not merit a place on serious arms control agendas—which throughout the 1970s and 1980s were dominated by nuclear arms control negotiations. But over the last decade, we have seen these comfortable assumptions overturned".[17]

Nevertheless, and after a series of the new Ad Hoc Group meetings in 1995, 1996 and 1997, only in mid-1997 did a 'rolling text' emerge and real negotiations begin.

There are reasons why this slow pace of negotiations on strengthening the BWC might have been expected. Certainly there were other pressing issues on the arms control agenda during this period—the Extension Conference of the Nuclear Non-Proliferation Treaty and the conclusion of the Comprehensive Nuclear-Test-Ban Treaty, to name two. Also, having just agreed a comprehensive Chemical Weapons

Convention, States might have wished to see how its implementation process progressed prior to developing a verification system for the BWC. However, there were other, more cogent, reasons for the slow and difficult negotiations, despite repeated statements from major States that they wished to address this problem effectively.[18] Manifestly, the States involved have different main aims: much of the developed world wants to use the BWC as a means of proliferation control, while for much of the developing world access to biotechnology for civil development is the crucial issue. Clearly also, the suspicion must exist that some States may wish to retain the option of an offensive biological weapons programme.

At the Third Review Conference an ad hoc group of experts was mandated to examine possible means of verifying the Convention.

At a more technical level, there are several clusters of difficult issues that have to be resolved. The first of these concerns the degree of verification required. The CWC requires extensive mandatory declarations and routine inspections—geared to the different types of chemical—that will allow detailed insight into the operations of the worldwide chemical industry. Is it sensible to have a similar approach in a BWC Verification Protocol? How much would such a system cost and how should the number of inspections be fairly allocated between the parties, given the preponderance of facilities in the developed world? Some argue that such routine inspections are necessary to achieve a baseline of understanding of relevant civil capacities in different States; others ask whether a costly system will be set up to gain little, yet put confidential commercial and national security information at risk.

If such routine inspections cannot be agreed to, then even more weight would fall on challenge inspections, but how are challenge inspections to be implemented? How many States will have to agree in order for a challenge inspection to go ahead? And for both routine and challenge inspections, how are on-site visits to be organized so that the risk of losing critical information is eliminated? Clearly, some States, such as the United Kingdom, feel that their practice inspections indicate that confidential commercial information can be protected in effective on-site visits and inspections;[19] others appear unconvinced.

. . . after a series of the new Ad Hoc Group meetings in 1995, 1996 and 1997, only in mid-1997 did a "rolling text" emerge and real negotiations begin.

A second set of issues concerns definitions and lists. One State is arguing that the present BWC does not specify clearly what agents and activities are prohibited and therefore clear instructions are required to specify what may and may not be done. While this might, on the face of it, seem a good idea, other States argue that it is much better to retain the general ban set out in the General Purpose Criterion and to add any specificity required in the details of the additional verification instrument now being negotiated. This would avoid the possibility of loopholes and ambiguities being created because of what is *not* specified in the Convention itself.

A third set of issues concerns the relationship between the obligations in Article III (on non-transfer) and in Article X (on technology transfers). Developing States wish to gain technological benefits in this important growing area of industrial development and see no reason why supplier groups should retain other export control mechanisms (the Australia

Group) in addition to a strengthened BWC. Suppliers point out that their clear responsibility is to maintain control over exports. An analogous problem was solved in the endgame of the CWC negotiations when the suppliers agreed to look again at the role of the Australia Group after the Convention had been in force for some years.

From the point of view of some developing countries, this is an inadequate solution; they want to see the complete elimination of such export control regimes. Some suppliers, however, see arms control agreements as only one part of a set of measures that are required to control the proliferation of weapons of mass destruction. In this view, export controls form a vital complementary measure to an arms control agreement but cannot be replaced by it.

Reading the current rolling text with these differences in mind shows clearly why so much of it remains in square brackets. The negotiators from States parties in Geneva and the foreign ministries in States capitals will have a difficult time as they attempt to integrate the various positions. Yet there is a sense that this job has to be done *now*. There is a window of opportunity because concerns about the proliferation of biological weapons are evident at high political levels, and because the technical work required to detail much of the additional instrument has been done since 1991.

. . . much of the developed world wants to use the BWC as a means of proliferation control, while for much of the developing world access to biotechnology for civil development is the crucial issue.

These negotiations to strengthen the BWC may fail in the face of the evident difficulties, but, should this happen, there will be profound consequences. Without a strengthened BWC the international community will have less legal and institutional legitimacy in dealing with potential proliferators. Enhancing the BWC will be a much more effective and certainly less costly means of controlling proliferation than being forced to mount a series of UNSCOM-type operations. We must all carefully monitor the progress of these negotiations over the next few years.

Towards an integrated regime

Looking to the future, it seems likely that it will become more and more difficult for countries to stay outside of the arms control regimes constructed to prevent the proliferation of dangerous destabilizing weaponry. The CWC clearly includes penalties of some severity for the industry of countries outside the regime.

We might therefore hope to see a BWC organization operating to some extent with the CWC organization in the joint control of chemical and biological weapons. At the very least, a joint financial and administrative system could be an efficient and effective arrangement. We would still not, however, have in any way completed the task of building an integrated arms control regime. Matched against reasonable standards of what might be expected in an effective control regime—for example, automatic, defined sanctions for violations—even the present CWC remains quite deficient.[20]

Finally, since the problem of controlling weapons proliferation is but part of the international control agenda in the longer term, because of our modern science-based industrial capabilities, we may also hope to see an integration of arms control regimes with other international control mechanisms, for example, in relation to environmental protection.[21]

Notes

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4 Signalled by the elucidation of the periodic table of chemical elements in the latter part of the nineteenth century.

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Conventional Armaments: An Overview

Yves Boyer

The disintegration of the former Soviet bloc opened the gates to an international landscape that is disconcerting in many ways. The map of Europe has been radically transformed with the appearance of 15 new States. Three former Warsaw Pact countries are soon to become members of the North Atlantic Treaty Organization (NATO) and Russian generals are now posted at NATO Headquarters. Geostrategic changes are causing international relations to be pulled in different directions, bringing as much uncertainty as hope. On the one hand, greater regional or transnational integration—through organizations such as Asia-Pacific Economic Cooperation (APEC), the Association of Southeast Asian Nations (ASEAN) Regional Forum, the Organization for Security and Cooperation in Europe (OSCE), the European Union (EU), the North American Free Trade Agreement (NAFTA)—is helping to increase stability and bolster growing interdependence. On the other, new types of threats have emerged, which do not necessarily lend themselves to the traditional use of military force. Rival bands of guerrillas, millenium sects, religious extremists and international criminal organizations not only inflict a heavy price on their own

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societies, viz. Rwanda and the use of very unsophisticated weapons, but also may disrupt international peace. This phenomenon led former Secretary-General Boutros Boutros-Ghali to ask the United Nations to concentrate its effort on the weapons "that are actually killing people in the hundreds of thousands".[1]

The many implications of such a revolutionary transformation of our geopolitical environment have not been fully appreciated. At the very least, it will have a dramatic impact on the place of the military in democratic societies, on the role of military forces in international relations, and on future force postures. According to some defence analysts in the United States, the military may itself be on the verge of a revolution. The many issues involved will transform the nature of military needs in terms of equipment and have a direct effect on defence industries. These uncertainties are raising fundamental questions on the function and control of conventional weapons in the new international era.

Who is spending what on defence?

According to the International Institute for Strategic Studies (IISS), there is clear evidence that, after the disappearance of the Soviet Union, the Western world still possesses the most formidable array of conventional weaponry.[1] In budgetary terms, it represents the largest share of world defence spending. In 1995, for instance, NATO countries and Japan spent 64 per cent of the total, or $US 519 billion, of the $US 814 billion total global military spending.[2] Out of this amount, five countries represented $US 446 billion (see inset, page 50).

Though the Western democracies outspent any other country or group of countries on defence, the picture would not be complete without mentioning that those same countries are embarked on a path of drastically limiting their defence spending. Since the end of the war in the Persian Gulf and the

collapse of the former Soviet Union, Western countries have restructured their forces. Significant adjustments have been proposed: at the occasion of the Bottom-Up Review in the United States in 1993, during the preparation of the White Defence book in France in 1994 and in the recent National Defence Program Outline in Japan. Between 1985—a peak year in NATO's defence spending effort—and 1994, Germany diminished, in constant 1993 prices, its defence budget by 25 per cent and its manpower by 23 per cent. In order for Germany to comply with the criteria defined for eligibility in the European Monetary Union, the financial plan decided in mid-1996 called for the German Defence Ministry to implement another 7 billion DM of savings (about $US 4.9 billion). The corresponding figures for the United Kingdom are a 19 per cent decrease in the defence budget and 22 per cent in military manpower. Though begun later, France is on the same track with its new defence posture presented in February 1996.

The effects of those reductions have been translated into a significant shrinkage of the military potential of West European Powers. The number of active brigades in the German army has been downsized from 36 to 21, of which only 8 are at a high state of readiness. In the United Kingdom, the army comprises only 120,000 soldiers. French army regiments will be reduced from

United States — $US 273 billion (259 billion in 1997)

Japan — $US 50 billion (46 billion in 1997)

France — $US 48 billion (38 billion in 1997)

Germany — $US 41 billion (33.6 billion in 1997)

United Kingdom — $US 34 billion (33.2 billion in 1997)

129 to 85, with a goal of 60,000 troops of the ground forces in the field, backed by support and reserve troops, with a total of 140,000 military personnel.

Between 1990 and 1996, the equivalent of the entire British armed forces manpower has disappeared in Western Europe and reductions equivalent to the Italian defence budget have been implemented.[3] Equipment has also been eliminated. There are no more "sacred cows" that have to be preserved at all costs. In Western Europe major programmes such as the French *Leclerc* main battle tank, the Franco-German *Tiger* attack helicopter, and the *Eurofighter 2000* have been reduced. In the United States high-tech programmes such as the F-22 and the F/A-18E/F are among the programmes that have been reduced in order to lessen the United States federal budget deficit.[4]

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Those drastic reductions have, in different European countries, opened the way to ending compulsory military service, such as in the Netherlands and Belgium. France will follow by the year 2000. The Spanish government announced it will also move towards abolishing compulsory military service.

Because of the general diminution of manpower and units, major conventional military equipment has been either destroyed in the framework of the 1990 CFE Treaty, or offered to southern European countries, in the framework of the "cascading" programme, allowed by the Treaty.

It should be noted that though there is a general decrease in Western defence posture, other areas of the world are in a phase of military build-up. Southeast Asia is an area where there is a growing demand for sophisticated armament. In 1997, Thailand became the first southeast Asian nation to have an air-capable ship, with the delivery by the Spanish shipbuilder EN Bazan of the Offshore Patrol Helicopter Carrier Chakri Naruebet.[5] Modern fighters are also entering the inventories of many countries of that area: Viet Nam is receiving Russian SU-27s; Malaysia has received US F/A-18s; and Singapore, F-16s.

What role for military forces?

The general decrease in defence spending, at least in Europe, derives from the widespread belief in political circles in Western Europe and in the United States that the present international situation is offering "a strategic pause". With the one exception of the possible launching of conventional-equipped ballistic missiles (already in the possession of so-called "rogue nations"), there is no serious conventional military threat for the foreseeable future to the territory of any countries of Western Europe, North America and Japan. The absence of direct military threat does not mean, however, that military forces are not needed.

For most Western countries, military forces have seen their role being transformed from guarding against a possible massive onslaught from the Soviet bloc to projecting power beyond traditional NATO boundaries. Since 1989, military interventions of various types have illustrated this evolution. A new role for the Western armed forces has thus emerged, with interventions commonly known as "military operations other than war". Such operations correspond to the growing role being played by the United Nations, which has authorized the use of military forces to implement resolutions decided by the international community. Missions have ranged from

relief operations to peace enforcement. In most cases, these operations posed specific problems that did not require high-tech equipment or huge amounts of heavy material, with the exception of transport (air and/or sea) and command and control assets. For those peace-keeping operations, military forces may operate in areas where States no longer control part of their territory or where narco-guerrillas or organized crime groups flourish.[6]

In those areas, military interventions involve a wide variety of actions among which the strictly military may not be the most important. Some defence specialists argue that what is needed in conventional armament in the future is not traditional military equipment but equipment that can assist in "constabulary duties". With the exception of intelligence gathering, communication and non-lethal weapons, such duties would not require high-tech equipment.[7] One may recall that many of the recent peace-keeping operations have been the result of international spillover of internal disorder, exacerbated by the spread of small arms and light weapons in the hands of guerrilla groups or organized crime.

. . . profound, if not revolutionary, changes deriving from technological advancements will transform the nature of war.

Another dimension of the future development of military forces is the growing realization that profound, if not revolutionary, changes deriving from technological advancements will transform the nature of war. This is a widely-held opinion in various circles in the United States, particularly among those debating the possibility of a "revolution in military affairs" (RMA), a mixture of new concepts of operation, technological innovations and new force structures.

In Western Europe and in Asia, with the probable exception of China, debates have not yet reached that intensity, though it is generally acknowledged that "defence depends more now on technology than sheer weight of numbers".[8]

One of the key concepts of RMA concerns information warfare, in the sense that military superiority will belong to the camp that possesses the capacity to deny the opposing force access to information in the "battlespace", to penetrate its information systems, to blur its vision of events and to disrupt the tempo of its operations.[9] According to that concept, the camp that has the "dominant battlespace knowledge" will prevail. The RMA process may gradually transform the defence requirements of conventional weapons. Emphasis will be put on digitalization of the battlefield in order to integrate information flow and synchronize the manoeuvres of forces. New computerized information networks, so-called smart weapons systems, are also being designed to reduce casualties. In the United States, equipment has already been tested in the framework of *Force XXI*, which is aimed at inflicting between 15 to 20 casualties for every one on the United States side.[10] In that context, futuristic weapons systems, where sensors matter as much as platforms, are envisaged for the defeat of the enemy. Those weapons systems can be separated into two different categories.

In the first category is equipment for surveillance and long-range precision strikes:

—Global surveillance assets in space, with optical, radar and infra-red observation satellites, theatre surveillance with UAV and tactical information (JSTARS, HORIZON). Many of those assets will represent a growing market where overlap between defence and civilian surveillance systems exists.

—Stand-off platforms, stealth capacities, precision guidance systems, missile defence and information dominance capacities.

In the second category, even more futuristic weapons systems can be envisaged that rely on a greater use of:

—Robotics, non-lethal systems (particularly for peace-keeping operations), psycho-technology.

—Nanotechnologies that, among other things, may allow "the dispersion of thousands of tiny intelligence-gathering machines and brilliant weapons systems able to make sophisticated decisions about when and how to act).[11]

Technological developments relying on dual technologies will also represent a very strong incentive to transform defence requirements. Traditional equipment needed for armoured warfare (such as tanks, artillery, armoured personnel carriers) will play a lesser role in favour of a greater use of high-tech sensors, computer-assisted decision-making processes and precision ammunition.

Technological developments relying on dual technologies will also represent a very strong incentive to transform defence requirements.

The capacity to integrate in a coherent way those many systems, from soldier's equipment to the strategic level of operations, will give countries having such abilities an indisputable margin of military superiority. Besides its technological aspects, the RMA may transform, in depth, the way modern armed forces are structured and used on the battlefield. Army, navy, air forces, C4I (Command, Control, Communication, Computer and Intelligence) and space-based assets have to be integrated for launching combined-arms operations in the "battlespace" where information superiority will be an essential ingredient leading to victory.[12]

Should a single nation have the monopoly in producing high-tech weapons systems?

There is now a clear shift in international politics from geostrategic imperatives towards geo-economic issues. In the United States, for example, the refocusing of American foreign policy to maximize gains in world economic competition has been exemplified by President Clinton's decision, when first elected in 1993, to reorganize the Executive's decision-making process with the creation of the (National Economic Council) NEC.

Accordingly, advances in high-tech research, development and production are advantages that could be maximized through promoting weapons systems development. That has consequences for future conventional arms control.

It should be particularly stressed that, in the years ahead, the development of new military equipment will be meeting the demands of a new technological and geopolitical environment. The issue, argues defence analyst Paul Bracken,[13] will be between defining and producing equipment for "the next military", driven by short-term requirements (traditional types of weapons such as tanks and aircraft) or equipment for "the military after next" answering the needs of the RMA (such as infowar, non-lethal weapons, disabling technologies). The question is thus not so much the speed it takes to produce new equipment as the capacity to identify the equipment most needed to be efficient in the "battle space". Should arms control in that field be aimed at limiting access to high-tech weapons, the result could be a monopoly for the already most advanced country in that field. Moreover, since dual technologies are dominating progress in both the civilian and the military sector, the countries in a "junior position" would increase the risk of being overrun in many world markets.

Conclusion

In order to seek efficiency, arms control related to conventional armaments ought to be divided into two relatively different sets of problems.

The first relates to sophisticated weapons systems, which will probably represent in the future a significant part of conventional weaponry. Their qualitative characteristics will be as important to tackle as their quantitative dimension, since many of the new weapons systems are playing the role of "force multiplier". Differently put, what matters more than sheer numbers of weapons are their qualitative sophistication in incorporating complex electronic devices and their integration into a "system of systems", thereby increasing dramatically their individual efficiency. An understanding of the way to operate a complex weapons system is now becoming a *sine qua non* condition for defining new arms control concepts relevant to high-tech conventional weapons.

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The second set of problems relates to small arms issues, limitations on which pose very difficult practical issues. The problem has, however, only recently begun to be addressed in a comprehensive manner by international organizations. The work done by the United Nations Panel of Governmental Experts on Small Arms[14] should be encouraged as well as the transparency measures on conventional arms transfers such as the Register of Conventional Arms.[15]

Finally, it should be recalled that measures for weapons limitations are easier to reach when they take place in already existing frameworks of political consultation. That was an important lesson drawn from the OSCE in Europe

without which it would have been difficult to conclude the CFE agreement.

Notes

1. Weapons listed in that category: rifles, grenades, mines, machine guns, light mortars and "man-portable" munitions and weapons.
2. *The Military Balance* 1996–1997, IISS London.
3. Those comparisons are drawn from figures published in *The Military Balance* 1995–1996, IISS London.
4. "Bye, bye birdies", Washington outlook, *Aviation Week and Space Technology*, (26 August 1996).
5. Richard Scott, "Thailand enters carrier class", *Jane's International Defense Review*, (April 1996).
6. Xavier Raufer,"Les guérillas dégénérées", *International Defense and Technologies*, (March 1996).
7. See, for examples, Ralph Peters, "After the revolution", *Parameters*, (Summer 1995) and Carl Builder, "Looking in all wrong places?", *Armed Forces Journal International*, May 1995.
8. Michael Portillo, UK Defence Secretary, quoted in *Jane's Defence Weekly*, (11 March 1997).
9. On this topic see: "US wrestles with info warfare enigma", *Defense News*, (10 September 1995).
10. "US Army stresses C2 advantage", *Defense News*, (14–20 March 1994).
11. *Strategy and the revolution in military affairs: from theory to policy*, Steven Metz and James Kievit, US Army War College, SSI, 27 June 1995, 38p.
12. See: "*Joint Vision 2010*", Joint Chiefs of Staff, the Pentagon, July 1996.
13. Paul Bracken, "The military after next", *The Washington Quarterly*, vol. 16, No. 4 (Autumn 1993).
14. A/52/298.

[15] A/52/312 and Add. 1 and 2.

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Small Arms and Transparency

Curbing Illicit Trafficking in Small Arms and Sensitive Technologies: An Action-Oriented Agenda*

Péricles Gasparini Alves and
Daiana Belinda Cipollone

There are strong reasons to argue that the issues of illicit trafficking in *small arms* and *sensitive technologies* can be addressed as a single problem, even though, at first glance, both encompass a large scope of subjects with sharp differences. For example, while illegal trafficking in small arms covers mostly hand/shoulder-carried arms and a handful of other *light weapons*,[1] illegal trafficking in sensitive technologies involves a quite different category of products such as nuclear material, chemical and biological substances, their related technologies and delivery vehicles.

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Both of these illegal dealings, however, are often linked to drug smuggling, terrorist activity, guerrilla warfare, and organized crime, as well as other types of low intensity conflict. In some cases, illicit trafficking in drugs and small arms is a precursor to trafficking in sensitive technologies, creating a spiral of corruption and other felonies of national and international proportions.

Illicit trafficking therefore affects both the stability of States and the safety of their populations. There are no national or regional boundaries delimiting this type of traffic: the problem is truly global with multi-faceted ramifications. Curbing its development and proliferation calls for a better assessment of the phenomenon and a new way of looking at problems and identifying solutions. In a world of growing interdependence, the greatest challenge today seems to be that of making bold decisions establishing new priorities and being willing to start innovative cooperative ventures, while changing old ways of thinking and working.

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This attitude constitutes a particular *vision*, which is an integral part of the quest for a new world order: seeking structural changes to the fabric of international security alone will not be enough to reach this goal; one must also dare to undertake profound transformations of fundamental values. Coping with the issue of illicit trafficking from a new perspective is therefore the *sine qua non* for success in this fight both on the national and international level.

Understanding the problem

There is a real need today to address the issue of illicit trafficking in small arms and sensitive technologies from a variety of angles, taking into consideration their interrelationship and implications for other areas of social and State security. It is important to venture to make assessments of the illicit trafficking problem in different regions of the world. This has been the challenge that the United Nations Institute for Disarmament Research (UNIDIR) has faced over the last several years. In trying to clarify the illicit trafficking problem, it has organized different meetings and supported the publication of books describing, for example, what small arms are, what constitutes their illicit trafficking, and the kind of conflicts in which these weapons are being used.

There is a real need today to address the issue of illicit trafficking in small arms and sensitive technologies taking into consideration their interrelationship and implications for other areas of social and State security.

In addition, though it is a fact that some manufacturers and dealers have been involved in illegal transactions, the role of manufacturers and dealers in illegal trafficking in small arms is rarely addressed. The debate promoted by UNIDIR helps to fill that gap.

There is also a need to understand illicit trafficking better because it is generally carried out in secret. What are the schemes used to transfer weapons, substances and technologies? What factors influence manufacturers and dealers to engage in illicit trafficking? What are the different interrelationships between arms manufacturers and traffickers? How

and why is it so difficult to control illicit trafficking in a changing supply and demand environment?

Illegal trafficking in nuclear/radioactive substances has been a subject of growing concern since the late 1980s. Like other problems involving smuggling of illegal substances and material, curbing this type of trafficking is as much a problem of controlling national supplies of nuclear/radioactive material as it is a matter of coordination of knowledge and information on the international level.

While law enforcement, intelligence services and related institutions constitute the first counter-traffic obstacles within national boundaries, several organizations such as the International Criminal Police Organization (INTERPOL), the International Atomic Energy Agency (IAEA), the World Customs Organization (WCO), and others are also sensitive to the issue. As in the case of small arms and drugs, it is well known that there is an effort to understand the specific sources of supply and the flow of demand of material related to the production of weapons of mass destruction. Efforts are also made in many countries to improve the physical safety of installations that contain or transport sensitive material and substances. Yet what other kinds of cooperative measures exist on the national and international levels? Are those cooperation efforts sufficient? Is there room for improving individual and/or collective actions?

Of all categories of weapons of mass destruction, biological agents are the only ones that do not have an internationally binding verification component that would monitor non-production and therefore make clandestine proliferation more difficult. This is even more important given the unfolding developments in biotechnology, where a variety of old and new agents could bring to light new means of, and access to, biological warfare in the future. Curbing access to those agents continues to be a formidable task with which the international community has yet to come to grips.

The discussion promoted by UNIDIR also addresses the role of terrorism in illicit trafficking. How and when did drug cartels start supporting terrorist groups? Are present trends in such support the same today as in the 1970s and 1980s? Are there similarities in such trends from country to country or region to region? How can national means of counter-terrorist activity face increasingly rich and heavily armed groups? How can human and material resources be better managed to respond more appropriately to the mounting requirements of law enforcement and to strengthen information-gathering centres?

Combating illicit trafficking: looking ahead

The UNIDIR effort also stimulates a reflection on how institutions and governments can be better prepared to counter illicit trafficking. There is a quest to highlight perspectives for new and improved synergies and international cooperation. In the area of small arms, for example, intensive efforts are under way at the global and regional levels to reach agreement on curbing the illicit traffic in certain categories of small arms, ammunitions, and explosives.[2] Yet, given the nature and status of the problem today, any such agreement would not have great practical effect if counter-traffic authorities do not receive adequate means to enforce the law, not only at the national level, but also at the regional level as regards strategies of surveillance, tracking and intervention.

Moreover, it is not easy to organize multilateral action; the reasons and manner in which cooperation could be fostered vary from the issue of small arms to drugs to sensitive technologies. For example, cooperative efforts in the field of sensitive technologies must be seen against the background of the growing difficulties in controlling the export of such technologies while not hampering present or future development opportunities.

An additional obstacle is that, at the national level, few countries have a comprehensive legal regime that can provide for preventive deterrent initiatives, law enforcement and punitive actions in all areas of illegal trafficking.

At the international level, the development of ad hoc arrangements and regimes prevails today over global agreements controlling the transfer of certain sensitive technologies and goods. It is true, though, in spite of the absence of a solid legal regime, that there are some joint actions by members of those arrangements to coordinate national policies and to promote transparency in transfers of technologies and goods. However, none of these arrangements or regimes have multilateral verification systems. Nor do they provide for national control schemes.

Controls are expected to be carried out by regular national entities that are in charge of implementing national legislation. In some countries, these national entities have traditionally worked separately and do not necessarily share their work in great detail, e.g., police forces and intelligence services. In some instances, this state of affairs can create a gap in the relationship of institutions and in the final analysis it benefits those conducting illegal trafficking. Therefore, the international community must agree on a new agenda to fight illicit trafficking.

The international community must agree on a new agenda to fight illicit trafficking.

Having acknowledged this basic premise, one should question how the strengthening of international cooperation can contribute to the creation of a new agenda to fight illicit trafficking. Should there be a call for new tactical and strategic approaches? Is there a need to have more encompassing multilateral actions? The answer to both of

these questions is "yes". What is needed today is to increase the level of cooperation between and among those institutions and communities that could together, more effectively than alone, take action to combat illicit trafficking, be it in small arms, substances related to the production of weapons of mass destruction or terrorism.

There have been calls, for instance, to stimulate an increase in cooperation among intelligence services on a worldwide basis and between intelligence services and armed forces, organizations such as INTERPOL and the diplomatic community. It is evident that there is a need to structure the flow of information and action/reaction capabilities of legal authorities in a more fluent and comprehensive manner.

Strengthening the tools to fight illicit trafficking also calls for improvement in technical means at the disposal of law enforcement and information centres. Better telecommunications, integrated databases, and other systems that accelerate the ability of action/reaction must therefore be considered. This should include improved day/night, over-the-horizon tracking capabilities. New concepts of small satellites with sharper ground resolution in the radar, infrared and visible band levels are coming onto the commercial market at affordable prices. Policy makers and scholars alike are increasingly exploring the extent to which satellite technologies can assist in the detection, identification and tracking of illicit trafficking, particularly in multilateral actions.

It is apparent from discussions in different quarters that any code of conduct or agreement aimed at the curbing of illicit trafficking in small arms would have to address present problems, but some thought would also have to be given to ways to cope with past transfers. There is a great need for cooperation in this area, especially to identify transportation routes, stockpiles and related activities. How can the collection of illicit small arms in many countries be stimulated?

What new *gun-buy-back* type of idea can find consensus regionally, if not globally? In the area of sensitive technologies, there is much room for cooperation in transparency of transfers, which could lead to greater degrees of predictability of clandestine and other illicit events. How much transparency is necessary and how cooperation could take shape are still not clear and much work needs to be done to reach consensus.

In conclusion, there is a real need to put together those institutions that have practical experience in dealing with legal and illicit traffic in weapons, substances and technologies, to conceive a plan of action and a forward-looking agenda for cooperation. This has been the fundamental reason for the joint effort undertaken by the State Intelligence Secretariat of the Republic of Argentina (SIDE) and UNIDIR in organizing the April 1997 Buenos Aires Conference on the *Illicit Traffic in Small Arms and Sensitive Technologies*. The following recommendations, which derive from the debate during that conference, provide what could be considered as the first step towards achieving that goal.[3]

Recommendations

A. Short-term actions

1. National level

1. Raise the awareness of decision-makers to the growing importance of intelligence gathering in the prevention and struggle against the illicit traffic of substances, technologies, materials and equipment, and the need to provide relevant agencies with human and technical resources.

2. Increase investigations of centres of arms concentration, aiming at reducing their importance as a fuelling factor of armed violence at the domestic, regional and international levels.

3. Create or improve control of small-arms related systems in the possession of civil society.

4. Improve control mechanisms at airports, airstrips, harbours, terminals, borders, stations, land, air and sea routes, and any other place that could be used for illicit trafficking.

5. Install adequate mechanisms to coordinate the efforts of different agencies responsible for this issue.

6. Implement training courses for those directly enforcing national laws in the field, as well as for those at the senior levels of law enforcement.

II. Regional and global levels

1. Conduct a detailed survey of all industries relevant to the question, regardless of volume of sales, which might eventually be subject to control mechanisms.

2. Increase cooperation in intelligence activities to enhance the detection and monitoring of the supply and demand of arms and sensitive substances.

3. Conduct joint investigations of border areas and encourage the exchange of information on criminal elements and traffickers involved in the illegal trade of arms and other substances.

4. Enhance monitoring measures for legitimate international commerce in order to detect unusual flows of goods or funds that might be related to illicit trafficking.

5. Foster permanent collaboration among countries in order to implement national control measures for the export of dual use materials, equipment and technologies.

6. Encourage information flow among the national agencies specializing in the field at regional and global levels to improve policies and legislation concerning the investigation of illicit trafficking of materials and technologies subject to control.

7. Promote the dissemination of information on different types of proliferation of small arms and sensitive technologies at the political, university and business levels in order to assist the implementation and further development of control measures in each country.

B. Long-term actions

There is a growing willingness on the part of organizations working to curb illicit trafficking to cooperate both nationally and internationally. The development and implementation of the proposed short-term actions should be carried out as soon as possible in order to move on to actions that could have much longer and sustainable effect.

The reality is that it is very difficult to completely eliminate illicit trafficking worldwide. Long-term actions, therefore, should be *pre-emptive*, that is, they should anticipate the flow of such traffic, stopping attempts before they are made. This is the underlying notion of the following recommendations.

Long-term actions, therefore, should be *pre-emptive*, that is, they should anticipate the flow of such traffic, stopping attempts before they are made.

I. Cooperative initiatives

1. Collective actions for the future must integrate national and international ventures in combating illicit traffic. This is particularly important with respect to the sharing of growing databases on national experiences. One cannot discard all the existing knowledge, but rather optimize its utilization by:

(i) conducting training courses such as the preparation of professional staff on the identification, detection and development of illicit traffic;

(ii) filling the gap in the availability of information on certain criminal activities, thus allowing the creation of a unique and personalized system of databases;

(iii) instigating new activities between different organizations, for example, by stimulating an informal group of institutions to maintain a minimum flow of information, as well as formulating joint events; and

(iv) reinforcing cooperation between national organizations, and regional and global institutions that are not usual partners—such as with the United Nations, INTERPOL, IAEA, Euratom, Organization of American States (OAS), and governmental and non-governmental organizations.

2. In keeping with the spirit of cooperation, such actions should be taken collectively and jointly coordinated by all parties. Such an approach would ensure full participation by all cooperating partners, and would promote the sharing of responsibilities among them.

II. Legal aspects

1. The entry into force of the Chemical Weapons Convention (CWC) is an important factor in enhancing efforts to curb illicit trafficking. Reaching agreement on a verification package for the Biological Weapons Convention (BWC) would be an additional obstacle for manufacturers and dealers of illicit traffic. Yet new agreements, such as a comprehensive treaty on the registration of small arms, should be sought. The intelligence community, international police and border control authorities could conceivably strengthen monitoring

and control mechanisms under such a treaty. In the long run, all of these initiatives would undoubtedly help to broaden control regimes towards universality, or to give them a legally binding character.

2. Future-oriented actions must also be aimed at improving national import/export legislation and creating coherent international standards involving different countries. In the long term, the development of legislative reforms of an industry-wide national control of illicit arms and dual-use material would have to include information on manufacturers of this material. That could help adherence to treaties by parties that have not signed or ratified them.

III. Improving technical means

1. One of the major problems in fighting illicit traffic is identifying the dealers, the routes and methods most commonly used for such traffic. Past and present research work in this area plays an important role in the efficiency of implementing improved control regimes. In addition, understanding the demand for narcotics as it relates to the purchase of small arms helps prevent the flow of illicit traffic. In the light of this, there is a recognized need to establish more effective and continuous means of monitoring illicit traffic.

2. Satellite applications might be a feasible and viable option to support information gathering related to illicit trafficking. This leads us to ask the following questions:

(i) What existing satellite systems could enhance the international community's efforts in this area?

(ii) Are there any possible synergies between civil- and military-grade satellite assets?

(iii) How will information sharing in this area be structured in the future?

3. These are the major options for long-term actions. Others will be discussed below as strategic recommendations.

C. Strategic views

It should be reiterated that these recommendations were drawn up mainly for the above-mentioned seminar. In organizing this event, UNIDIR and SIDE both wanted the seminar to focus on what could be done in order to strengthen efforts aimed at curbing the illicit traffic in small arms and sensitive technologies. Thus particular attention was paid to enhancing cooperation between field-oriented institutions such as intelligence services, border patrol, other uniformed services, and international institutions such as INTERPOL. That theme was also highlighted at the 1996 Rio de Janeiro meeting organized by UNIDIR and the Brazilian Intelligence Service on the future of the transfer of sensitive technologies and control regimes. The 1997 Buenos Aires event therefore became a natural follow-up seminar that helped to broaden the debate. It will be a challenge to follow up on this Buenos Aires initiative.

One clear conclusion arose from those discussions. There was a general perception that no individual institution could cope with the problem of illicit trafficking in small arms or sensitive technologies on its own, and that no single approach to the issue would work. Hence, there was an indispensable need to increase cooperation in order to gain a better picture of the *why*, *how* and *when* of different transactions in the field.

A second conclusion derived from the discussions was that any adequate long-term action to curb such traffic *must* deal with all aspects of the issue and call out for inter-agency and/or international action.

Four strategic themes emerged in the following recommendations:

1. There is an evident need for institutions fighting illicit trafficking to learn more about each other in order to:

   (a) Know more about *who* does *what* and *how*. This could improve regional and even global coop-

eration. One example would be to develop better cooperation synergies between intelligence services and police forces.

(b) Better understand what similarities as well as differences there are in the body of law of different countries.

(c) Better discern *with whom* and *when* to join forces in fighting illicit trafficking.

(d) Increase opportunities of optimizing human, technical, and financial resources.

(e) Take advantage of potentials for complementarity.

(f) Develop standards for methods and procedures to hinder illicit traffic worldwide.

(g) Create or strengthen regional cooperation as a first step towards global initiatives.

Emphasis should be placed on increasing cooperation while taking into account the specificity of each institution.

2. There is a need for the international community to have a *new vision* of where efforts should be placed in the future with respect to curbing illicit traffic. That vision *must*:

(a) Promote a set of agreed norms against illicit trafficking in small arms (such as the *Inter-American Convention Against the Illicit Manufacturing of and Trafficking in Firearms, Ammunition, Explosives, and Other Related Materials*) as a contribution to a new international security paradigm. [Ed. Note: For text of the Convention, see Documentation in this issue.]

(b) Incorporate the notion that curbing illicit traffic is also linked to the need to address national and international security problems. In other words,

illicit trafficking does not exist in a political, military, economic or social vacuum.

(c) Stimulate awareness of the need to make the sale of small arms and sensitive technologies transparent. It is important to note that with transparency also comes a sense of responsibility on the part of States to identify, detect and react whenever appropriate. That is a *conditio sine qua non* for this new vision.

(d) Provide a clearer role for institutions combating such illicit traffic, such as:

(i) The intelligence community at the national and international levels (State and military intelligence, national police, border patrol, etc.);

(ii) Law makers, the legal system and the diplomatic community;

(iii) The academic community.

There is an important role for each actor to play. With respect to the role of intelligence services, for example, how could improved performance provide information to facilitate the struggle against illicit traffic? How could its role as information provider help policy-makers? In the case of other government and non-governmental institutions, what could be done to raise awareness of the problem of illicit traffic, particularly as regards its industrial base?

3. There is a need to build the structure of the fight against illicit trafficking on a solid base aimed at short- and long-term implementation.

(a) Short-term actions such as those mentioned earlier should constitute measures that could provide practical results within the next couple of years or so.

(b) Long-term actions, however, must prepare institutions to cope with illicit traffic well into the next century.

(c) Both types of actions *could* and *should* be carried out simultaneously.

4 The cooperative efforts of UNIDIR, the Brazilian Intelligence Service and the Argentinean State Intelligence Secretariat have provided an opportunity for experts and decision-makers to reflect on the practical measures that can contribute to building international security on a more solid base. These experts have invested their richest assets to serve this cause, among other things, their time, their attention and their intellectual input.

Yet, work is far from finished. The main objectives of the Buenos Aires seminar, its ideas, proposals, and recommendations should be widely disseminated. There is still considerable work to be done in order to convince those who can move mountains to take these new visions and short- and long-term actions further. Whatever was said above is worthless without actions: deeds *must* follow words and recommendations, for they alone can change the status quo.

Notes

1 The Report of the United Nations Panel of Governmental Experts on Small Arms defines the terms *small arms* and *light weapons* as ranging "from clubs, knives and machetes to those weapons just below those covered by the United Nations Register of Conventional Arms." It broadly describes *small arms* as those weapons designed for personal use and *light weapons* as those designed for use by several persons serving as a crew. The Panel thus defined and addressed the following as *small arms*: revolvers and self-loading pistols; rifles and carbines; sub-machine-guns; assault rifles; and light machine guns. It dealt with the following as *light weapons*: heavy machine-guns; hand-held under-barrel and mounted grenade launchers; portable anti-aircraft guns; portable

anti-tank guns, recoilless rifles, portable launchers of anti-aircraft missile systems, mortars of calibres of less than 100 mm. (See paras. 24–26 of the Report, A/52/298 of 27 August 1997.) Other sources do not distinguish these two categories of weapons but combine most of the items in their respective lists under the term *firearms*. See, for example, article 1, paragraph 3 in the OAS *Inter-American Convention Against the Illicit Manufacturing of and Trafficking in Firearms, Ammunition, Explosives, and Other Related Materials*, where *firearms* is defined as "any barrelled weapon which will or is designed to or may be readily converted to expel a bullet or projectile by the action of an explosive", except antique firearms, or "any other weapon or destructive device such as any explosive, incendiary or gas bomb, grenade, rocket, rocket launcher, missile, missile system, or mine."

2 See, for example: "Report of the Panel of Governmental Experts on Small Arms", op. cit.; "*Inter-American Convention Against the Illicit Manufacturing of and Trafficking in Firearms, Ammunition, Explosives, and Other Related Materials*", op. cit.; "Agenda Item 7: State Security Measures to Stop the Trade and Illicit Transfer of Small Arms", First General Meeting Between CARICOM and United Nations Secretariats and Related Agencies, CARUN 97/1/9, New York, 27–28 May 1997; "Ministerial Consultation on a Proposed Moratorium on Export, Import, and Manufacturing of Light Weapons in West Africa", Bamako, Mali, 26 March 1997; "Firearm Regulation for the Purpose of Crime Prevention and Public Health and Safety", Economic and Social Council (ECOSOC) resolution, 1997/39, 28 April–9 May 1997; "Model Regulations for the Control of the International Movement of Firearms, Their Parts and Components and Ammunition", Inter-American Drug Abuse Control Commission, OEA/Ser.L/XIV.4.CICAD/AREX/doc.5/97, 5 November 1997, Lima, Peru; General Assembly resolution on "Small Arms", A/RES/52/38 J of 9 December 1997; "EU Programme for Preventing and Combating Illicit Trafficking in Conventional Arms", Annex, DG E-C-I-SP IV.

3 These recommendations were prepared by Mr. Eduardo Pelayo together with the authors. It should be pointed out

that while they are derived from the discussions in the Buenos Aires seminar, they contain some reflections that may or may not represent the viewpoints of all the participants.

The Illicit Flow of Small Arms in South Asia

Reaz Rahman

Despite concern over the destabilizing impact of the illicit flow of small arms, it is an extraordinary fact that very little has been done to map its real dimensions.

Thanks to a handful of diligent researchers, we have some understanding of the issue. Newspaper reports are a vital source but are all too often alarmist, exaggerated or wildly speculative.

There is a vital need to identify the nature and dynamics of the illicit arms flow. This requires clear perception of the definition, inventory, quantity, origin and source of supply, costs, spread and destination of small arms. It needs objective assessment of the political setting and socio-economic underpinnings leading to conflicts, the nature of such conflicts and the impact of weapons used on the society, State and region. Most important of all it requires credible remedial approaches to control and contain their spread.

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The focus of this paper is on South Asia, particularly on Bangladesh and Northeast India.

Definition

There is no standard definition of small arms. The simplest definition is "any weapon that can be carried by a single person". That definition, however, belies the lethal versatility of these weapons, which is rooted in technological advances.

NATO has redefined small arms (light weapons) to mean, "All crew portable direct fire weapons of a calibre less than 50 mm and which will include a secondary capability to defeat light armour and helicopters".[1] A soldier today can carry cannon mortar, light anti-tank weapons, even shoulder-fired surface-to-air missiles (SAMs) as part of his personal equipment.

Inventory/armoury

The inventory covered by this definition is devastating in its range and firepower. Broadly, it includes pistols, rifles, assault rifles, sub-machine guns, light, medium and heavy machine guns (calibre not exceeding 14.5 mm), anti-aircraft and anti-tank missiles, light mortars, mines, and grenades. Such weapons fall under the nomenclature of non-major weapons systems, a term that hides their deadly menace. Some of the more specific aspects of the armoury are in annex I.

Origins and sources of illicit small arms in South Asia

South Asia is a repository of a vast range of qualitatively advanced light weapons. These arms come from a variety of countries through circuitous routes. It is not easy

to determine the origins. There are multiple potential suppliers. Certain broad patterns are none the less discernible.

(a) Cold war pipelines during the war in Afghanistan (1979–1988) following the Soviet invasion in December 1979 were the most important source for the flow of sophisticated small arms to South Asia. Chris Smith, Senior Fellow in the Centre for Defence Studies at London University, has documented in a series of articles the diffusion and impact of light weapons in the region. He also points out that detailed data on the volume and origins of such weapons is not available. Induction of arms came from two main sources: *i)* They were leaked or siphoned from the pipeline created by the United States; only 30 per cent is estimated to have reached the front line; and *ii)* The Afghan mujahedin gained huge stocks of the weapons from the Soviet army and allies through capture or defection.

(b) National production, import or transfer of technology. Ordnance factories in India, Pakistan and Bangladesh to a lesser extent produce a variety of small arms including assault rifles, grenades, mortars and landmines. A majority of small arms are acquired through imports or technology transfers. In turn, looting of police stations, skirmishes with anti-State elements, and thefts have all released arms from government stockpiles. Arms are also manufactured by government-approved establishments as well as small-scale producers using lathes and simple machine tools. These include AK-type clones, rifles and revolvers.

(c) Surplus stockpiles. The end of the cold war led to a glut in the availability and supply of small arms.